



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D205-596-107
Job Sheet 193047



Part No: D205-596-107

Job Qty: 1 pcs

Part Name: Aft Crosstube - Extended Height 31"



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 4/8/19

Job Tracking No:

Due Date: 4/30/19

Created By: Marie Lajeunesse

Type: SOLD

Description: *order 15019*

Note: D205-596-107 REV.C IPP Rev:D 05.03.21 Added bending procedure KJ/JLM IPP Rev:E 08-01-10 ECN 1075
DD IPP Rev F 08.04.28 Added bending & mat'l EC verified by: DD IPP REV:G 13.11.29 as per dwg DEO B-2
DD VERF:JLM IPP REV:H 15.01.28 as per dwg DEO B-3/CHG004 DD VERF:JLM IPP REV:I 18.02.08 AS
PER DWG REV.C DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
105	Crosstubes - 1	1 pcs	4/30/19	4/30/19	0.00	0.00	Crosstubes - 1		<i>GP 14-04-11</i>
							Crosstubes - 2		
							Crosstubes - 3		
							Crosstubes - 4		
107	QC 7	1 pcs	4/30/19	4/30/19	0.00	0.00	QC 7 - 10		
							QC 7 - 13		
							QC 7 - 14		
							QC 7 - 15		
							QC 7 - 17		
							QC 7 - 18		
							QC 7 - 19		
							QC 7 - 2		
							QC 7 - 28		
							QC 7 - 3		
							QC 7 - 30		
							QC 7 - 34		
							QC 7 - 36		
							QC 7 - 37		
							QC 7 - 41		
							QC 7 - 47		
							QC 7 - 48		
							QC 7 - 51		
							QC 7 - 58		
							QC 7 - 59		
							QC 7 - 60		
							QC 7 - 9		
							QC 7 - 68		
							QC 7 - 50		
							QC 7 - 67		<i>GP 14-04-12</i>



Container No: S171717



Part: D205-596-107

Job No: 193047

Serial No/Batch: S171717

Revision: C

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Container No: S171717



Part: D205-596-107

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Revision: C

Inspector:

Exp Date:

Instructions: TC STC SH03-6 Issue 4, FAA STC SR01742NY 13/11/04, EASA ST

				QC 7 - 40							
110	Crosstubes - Bend - 2 - B4B	1 pcs	4/30/19	0.00 0.00	Crosstubes - Bend - B4B	BB 4/23/2019					
130	QC 15	1 pcs	4/30/19	0.00 0.00	QC 15 - 12						
					QC 15 - 3						
					QC 15 - 47						
					QC 15 - 49						
					QC 15 - 58						
					QC 15 - 9						
140	Crosstubes - 2 - B4B	1 pcs	4/30/19	0.00 0.00	Crosstubes - 1 - B4B						
					Crosstubes - 2 - B4B						
					Crosstubes - 3 - B4B	DB 4/24/2019					
					Crosstubes - 4 - B4B						
150	Crosstubes - 3 - B4B	1 pcs	4/30/19	0.00 0.00	Crosstubes - 1 - B4B	BB 4/24/2019					
					Crosstubes - 2 - B4B						
					Crosstubes - 3 - B4B						
					Crosstubes - 4 - B4B						
160	QC 5	1 pcs	4/30/19	0.00 0.00	QC 5 - 10						
					QC 5 - 12						
					QC 5 - 17						
					QC 5 - 18						
					QC 5 - 19						
					QC 5 - 22						
					QC 5 - 24						
					QC 5 - 3						
					QC 5 - 43						
					QC 5 - 49						
					QC 5 - 51						
					QC 5 - 58						
					QC 5 - 68						
					QC 5 - 9						
					QC 5 - 50						
					QC 5 - 30						
					QC 5 - 40						
					170	QC 7	1 pcs	4/30/19	0.00 0.00	QC 7 - 10	
										QC 7 - 13	
										QC 7 - 14	
QC 7 - 15											
QC 7 - 17											
QC 7 - 18											
QC 7 - 19											
QC 7 - 2											
QC 7 - 28											
QC 7 - 3											
QC 7 - 30											
QC 7 - 34											
QC 7 - 36											
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QC 7 - 41											
QC 7 - 47											
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QC 7 - 58											
QC 7 - 59											
QC 7 - 60											
QC 7 - 9											
QC 7 - 68											
QC 7 - 50											
QC 7 - 67											
QC 7 - 40											
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4/8/2019

[Dart Hawkesbury] Job Sheet - Lajeunesse, Marie

180	Spray Paint - 2 - B4B	1 pcs	4/30/19	0.00 0.00	Spray Paint - 1 - B4B	• A2 19-4-25
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
					Spray Paint - 4 - B4B	
190	QC 14	1 pcs	4/30/19	0.00 0.00	QC 14 - 15	DAS APR 29 2019 68 9-89
					QC 14 - 2	
					QC 14 - 34	
					QC 14 - 41	
					QC 14 - 51	
					QC 14 - 58	
					QC 14 - 59	
					QC 14 - 9	
					QC 14 - 68	
					QC 14 - 40	
					QC 14 - 19	
200	Crosstubes - 4 - B4B	1 pcs	4/30/19	0.00 0.00	Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
210	QC 5	1 pcs	4/30/19	0.00 0.00	QC 5 - 10	• A3 19-4-26 DAS APR 29 2019 68 9-89
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
220	Packaging 3-1 - Stock - B4B	1 pcs	4/30/19	0.00 0.00	Packaging 3 - 1 - B4B	DAS 46 9-89 APR 29 2019
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	

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				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	DAS
225 DC - 1 - B4B	1 pcs	4/30/19	0.00 0.00	DC - 1 - B4B	21
				DC - 2 - B4B	9-35 APR 3 0 2019
230 QC 21 - FG	1 pcs	4/30/19	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	DAS
				QC 21 - SA - 53	21 APR 3 0 2019

Part Op 105 - (Crosstubes Chemical Conversion) INSIDE AND OUT
 Descriptions: 107 - (QC7-Inspect Chemical Conversion Coat
 110 - (CNC Alpha 160 Bender)1- Bend as per Dwg D2890 using CNC bender program D2890 2- Mark cut lines as per dwg D205-596-107
 130 - (QC15- Crosstube Dimensional Check)
 140 - (Crosstubes)1-Cut as per dimension sheet 2-Debur & Inspect for surface damage. Polish cut surface.Scribe part # and batch # on one end of tube.
 150 - (Crosstubes)***IMMEDIATELY AFTER GRINDING***
 160 - (QC5- Inspect part completeness to step on W/O)
 170 - (QC7-Inspect Chemical Conversion Coat)
 180 - (Spray Paint / NDT Room)1-Prime inside and outside per QSI 005 4.2 Primer 3143304 Paint 5166819
 190 - (QC14- Inspect Spray Paint)
 200 - (Crosstubes)1- Lightly scuff the bonded area using a 180 grit sand paper and clean the area with 41058 wash 'n' wipe 2- Apply Proseal as per dwg D205-596-107. 3- Install clamps as per dwg (Note 12)Torque clamps 80 to 100 in-lb as per dwg and Note 13) 5146137 exp 10/19
 210 - (QC5- Inspect part completeness to step on W/O)***PRIOR TO PACKAGING RECHECK TORQUE ON CLAMPS AFTER PROSEAL HAS CURED 72HOURS.***
 220 - (Identify as per dwg & Stock Location:)Identify and pack for shipping as per PPP D205-596-107
 225 - (Document Control)Photocopy D205-594 bluefile & type labels per PPP D205-596-107 CHG003
 230 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6008-180	Crosstube Extrusion	1 pcs (1 ea)	105-Crosstubes - 1	
D2940-1	Support	2 pcs (2 ea)	200-Crosstubes - 4 - B4B	
D3595-063-530	Rubber Cushion 0.63" Wide X 5.30" Long	4 pcs (4 ea)	200-Crosstubes - 4 - B4B	
MS21920-28	Clamp	4 Ea (4 ea)	200-Crosstubes - 4 - B4B	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
105-Crosstubes - 1	D6008-180	1	5	0
200-Crosstubes - 4 - B4B	D2940-1 5124991	②	10	0
	D3595-063-530 5151475	④	54	0
	MS21920-28 5133201	④	49	0

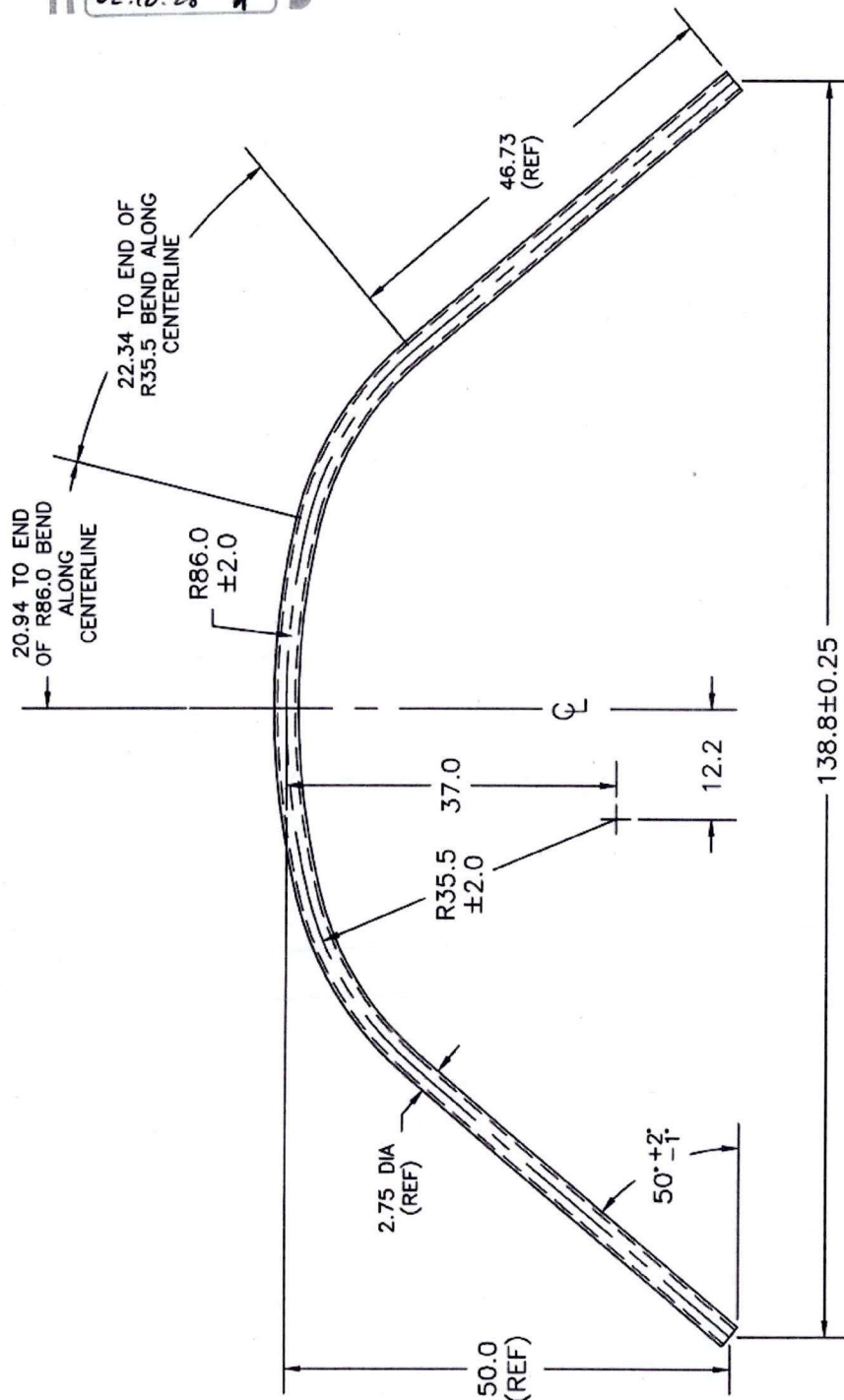
Part Specifications

Specifications could not be found.

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DART

DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2889	REV. B SHEET 1 OF 1
DATE 02.10.18		TITLE FWD CROSSTUBE	SCALE 1:20
A	99.05.21	NEW ISSUE	
B	02.10.18	ADD TANGENT LENGTHS; CHANGE NOTES	

RELEASED
02.10.28

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 193047 M15
19-04-08

NOTES

- 1) MATERIAL: MANUFACTURE FROM D6005-180 ($\phi 2.75$ OD x 0.375 WALL)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BEND PROGRESSIVELY WITH MINIMUM OF 3 PASSES
- 6) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

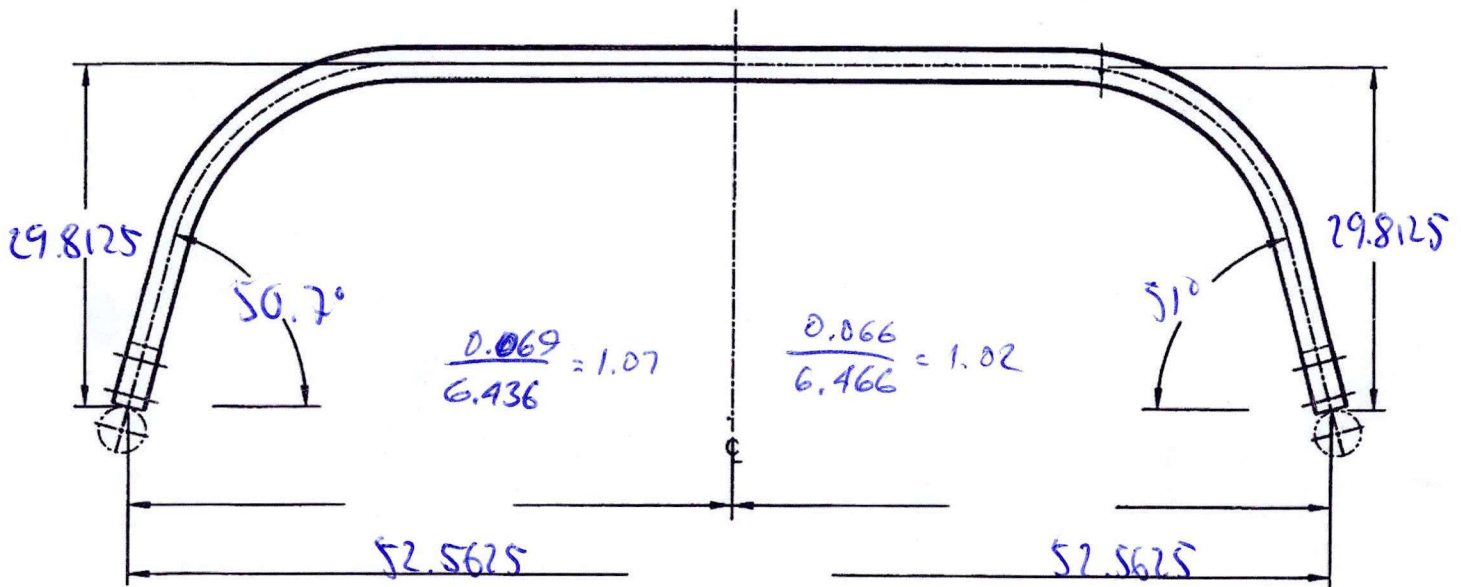
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

DART AEROSPACE LTD	Work Order: 193047
Description: Crosstube High-High Aft	Part Number: D205-596-107
Inspection Dwg: D205-596-107 Rev: C	Page 1 of 1

Required Dimension	Min	Max
Height	29.7	29.9
1/2 Span	52.4	52.6
Angle	49	52
Total Span	104.8	105.2
Bending Passes	3	--
Crushing	--	6%



	Side A	Side B
Bending Passes	10	10
Crushing	1.1%	1%
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	08.04.21	Dwg Rev updated	KJ/JM	
C	12.04.16	Added bending, crushing dimensions	KJ	
D	18.05.25	Dwg Rev updated	MG	AS